

CULTURAL RESOURCES SURVEY OF THE PIERCETOWN 100kV SUBSTATION, ANDERSON COUNTY, SOUTH CAROLINA



Chicora Research Contribution 570

CULTURAL RESOURCES SURVEY OF THE PIERCETOWN 100 kV SUBSTATION, ANDERSON COUNTY, SOUTH CAROLINA

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MANAGEMENT SUMMARY

This report provides the results of a cultural resources investigation of a substation on Martin Road in central Anderson County about 10 miles northeast of the City of Anderson and 1.5 miles southwest of Piercetown. The study was conducted by Debi Hacker, under the supervision of Dr. Michael Trinkley of Chicora Foundation for Mr. Tommy Jackson of Central Electric Power Cooperative. The work is intended to assist this client comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The property is to be used by Central Electric Power Cooperative for the construction of the Piercetown 100kV distribution substation line. It is situated northwest and west of two existing fenced substation lots.

The proposed substation lot has already been cleared, but will also involve construction of the proposed substation. These activities have the potential to affect archaeological and historical sites that may be in the project corridor. For this study an area of potential effect (APE) 100 feet around the proposed substation was assumed.

Anderson County received a comprehensive architectural and historical survey in 2002. In spite of the previous work, no architectural sites have been identified within, or adjacent to, the APE.

An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology failed to identify any previously recorded archaeological sites within the project's APE.

The archaeological study of the substation incorporated a pedestrian survey since ground visibility was excellent. Three judgmental shovel tests were excavated, all revealing extensive loss of A horizon soils revealing clay and gravel subsoils.

No archaeological sites or isolated finds were identified in corridor.

A survey of public roads within 100 feet of the survey area was conducted in an effort to identify any architectural sites over 50 years old that also retained their integrity. No structures were found.

It is possible that archaeological remains may be encountered in the project area during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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Introduction

This investigation was directed by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Tommy L. Jackson of Central Electric Power Cooperative. The work was conducted to assist Central Electric Power Cooperative to comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

transmission lines. The substation lot is about 13 acres in size, but the area proposed for use is only 3.5 acres and is situated immediately northwest and west of the existing facilities (Figure 2).

The eastern half of the substation lot is level, while the portion to the west exhibits a strong slope. A small creek flows northeast-southwest at the northern edge of the parcel. Elevations range from about 767 feet above mean sea level (AMSL) to nearly 787 feet AMSL. The entire area is relatively free of vegetation, appearing to have been stripped of A horizon soils at some point in the past. Aerial images from 1995 reveal extensive disturbance in the area. By 2010 it appears to have been graded and used for pasture.

The proposed parcel, as previously mentioned, is intended to be used as a transmission substation. Construction will require additional land alteration, including grading of an upland area and fill in the lower elevations with the

creation of a retention pond. Much of the tract will be left unaltered, although as mentioned it has already been heavily disturbed. Regardless, construction and maintenance of the transmission line may also have an impact on historic resources in the project area.

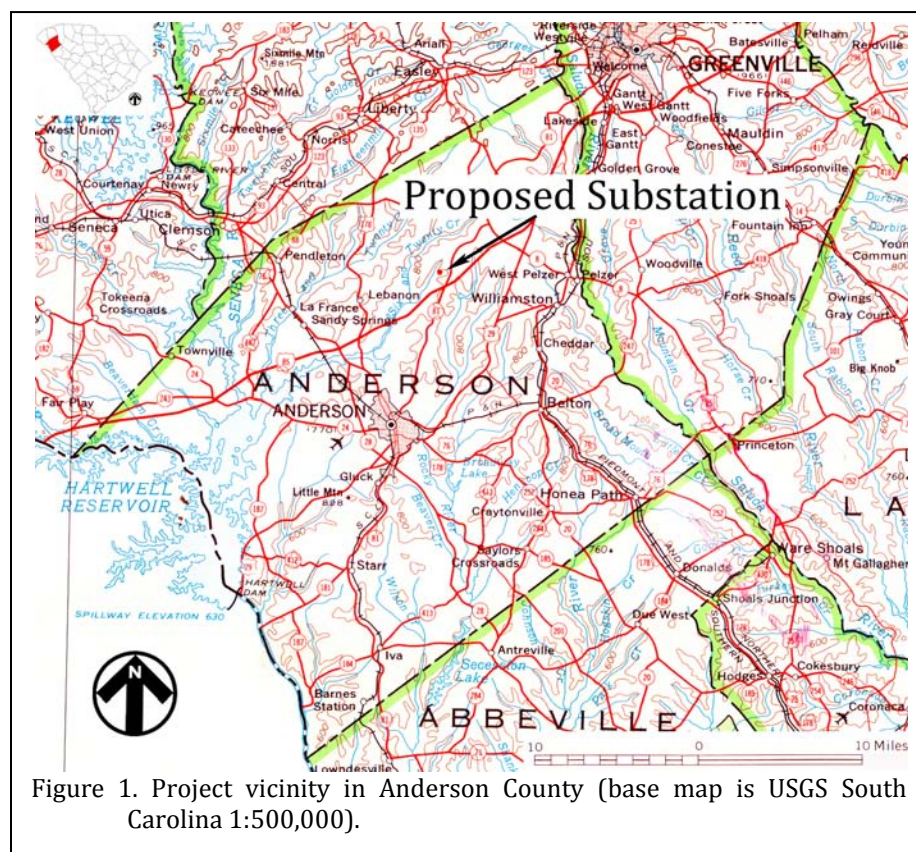


Figure 1. Project vicinity in Anderson County (base map is USGS South Carolina 1:500,000).

The project site consists of a proposed substation lot in north central Anderson County, about 10 miles northeast of the City of Anderson and 1.5 miles southwest of the small crossroad community of Piercetown (Figure 1). The tract is immediately adjacent to two existing substations at the intersection of two high voltage

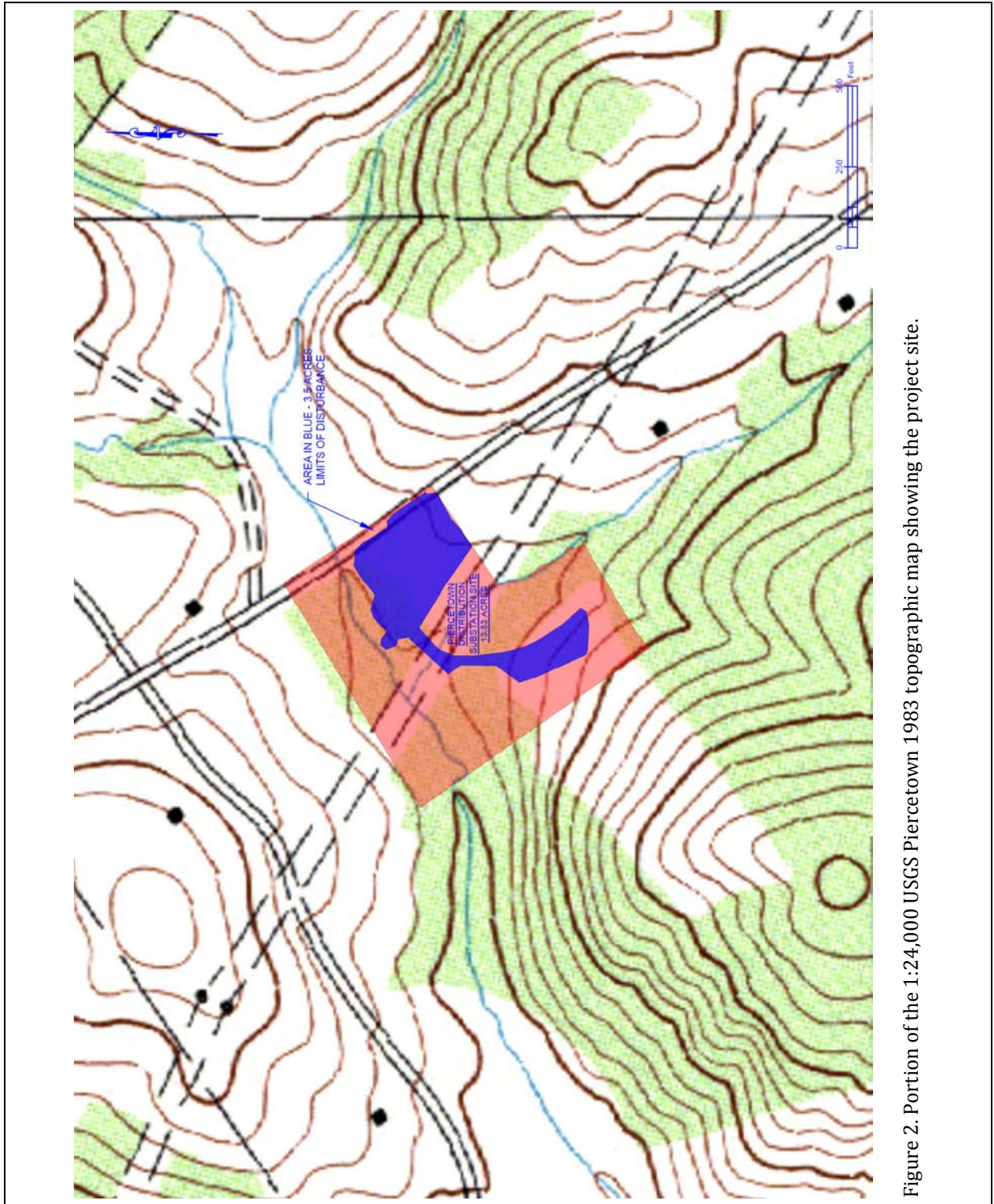


Figure 2. Portion of the 1:24,000 USGS Piercetown 1983 topographic map showing the project site.

The project will not directly affect any historic structures (since none are located on the substation parcel), but the completed facility may detract from the visual integrity of historic properties, creating what some consider discordant surroundings. As a result, this architectural survey uses an area of potential effect (APE) 100 feet around the proposed lot. This distance was selected since the lot vicinity is already heavily impacted by the existing substations and visual intrusion is of little concern (Figure 3).



Figure 3. View of the existing substations at the proposed site. View is to the west-southwest from Martin Road. The new substation will be to the right in the photo.

This study, however, does not consider any future secondary impact of the project, including increased or expanded development of this portion of Anderson County.

We were requested by Mr. Tommy L. Jackson of Central Electric Power Cooperative to conduct the cultural resource study in early May 2016, with the field investigations conducted by Debi Hacker and Dr. Michael Trinkley on May 17, 2016. The architectural survey and evaluations were conducted by Dr. Trinkley at this same time.

These investigations incorporated a review of ArchSite and the site files at the South Carolina Institute of Archaeology and Anthropology. As a result of that work, no previously recorded archaeological sites were identified within or adjacent to the APE. While a comprehensive architectural survey has been conducted for Anderson County (Revels and Sherrer 2002), no architectural sites have been identified within the APE. One structure (1244) was identified outside the APE about 680 feet north-northeast from the middle of the new substation. This structure, in ruinous condition, has been determined not eligible for inclusion on the National Register of Historic Places.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files and at the South Caroliniana Library.

The archaeological survey identified no archaeological sites within the 13 acre parcel. The architectural survey of the APE, designed to identify any structures over 50 years in age that retain their integrity and that are potentially eligible for the

National Register of Historic Places revealed no such structures.

Report production was conducted at Chicora's laboratories in Columbia, South Carolina on May 19-20, 2016. The only photographic materials associated with this project are digital and will be retained by Chicora Foundation.

INTRODUCTION

Environmental Background

Physiography and Geology

The project area is situated in north central Anderson County, northeast of the City of Anderson. It primarily falls on a ridge saddle between two minor drainages (Figures 1 and 2).

Anderson County is in the northwestern part of South Carolina and is bounded to the north by Oconee and Pickens counties and to the south by Abbeville County. The eastern border, shared with Greenville County, follows the Saluda River, while the western boundary with Georgia is defined by the Savannah River, part of which has been flooded to create Hartwell Reservoir.

The county is located within the Piedmont region. Physiographically, the county is a thoroughly dissected plain. The relief ranges from nearly level to steep, but it is dominantly gently sloping to moderately steep (Herren 1979:1). Although county-wide the elevations range from 450 feet above mean sea level (AMSL) to 1,014 feet AMSL, the elevations in the project area range from about 767 to 787 feet. In general, the topography slopes upward to the southwest.

The drainages form a dendritic pattern and throughout the Piedmont this terrain has been extensively dissected and degraded. The Seneca River and its tributaries, such as Six and Twenty and Rocky creeks, drain the central portion of the county in the vicinity of this project.

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasseltan 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground

with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). Anderson County is just above the Slate Belt, in an area characterized by highly metamorphosed gneisses, schists, and amphibolites (Murphy 1995:47). There is only one association in Anderson County formed in loamy alluvial sediments found in the floodplains.

The bulk of the soils are formed in materials weathered from the underlying bedrock of granite, schist, or gneiss.

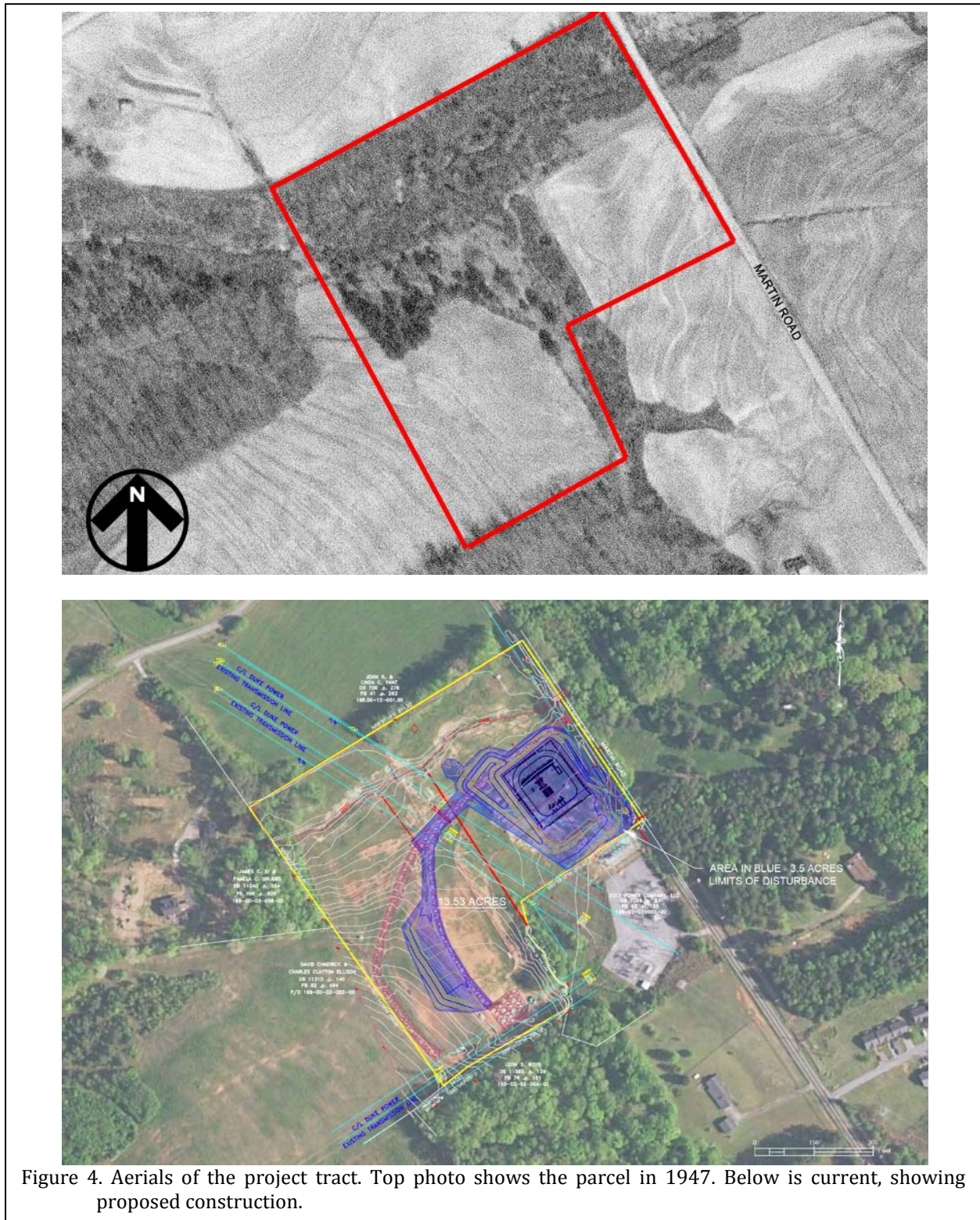
Soils

The project area is entirely situated on Madison sandy loams. On the lower and more level elevations, which comprise about 29% of the parcel, the soils are Madison sandy loams, 6 to 10% slopes. To the west, on the remaining 71% of the tract, are Madison sandy loams, 15-25% slopes.

Under the best of circumstances, the Madison soils have an Ap horizon about 0.5 foot in depth consisting of reddish-brown (5RY 5/4) sandy loam overlying a B2t horizon of red (2.5YR 4/6) clay to a depth of about 2 feet. On steeper slopes, however, erosion can be severe. Throughout the project tract, exposed red clay with only occasional patches of sandy soil were visible.

Aerial photos in 1947 (GS-DI-7-29) show the slope entirely wooded, while the low ground is entirely cultivated. This land-use pattern was largely unaltered as late as 1975 (GS-VEA-1-421), although by that time I-85 had been constructed. By the mid-1990s, however, considerable earth movement had occurred in the study tract, resulting in conditions present today.

ENVIRONMENTAL BACKGROUND



The 1934 South Carolina Erosion Survey by M.W. Lowry found that this portion of Anderson County exhibited moderate sheet erosion with occasional gullies (Lowry 1934). This portion of Anderson County has lost up to 1.1 foot of soil through erosion in the nineteenth and early twentieth centuries (Trimble 1974:3). It is part of the area classified by Trimble as having high antebellum erosion land use with postbellum continuation and belonging to his Region III — the Cotton Plantation Area (Trimble 1974:15). This area, because of the nature of the soils, the type of agricultural products grown, and the form of tenancy common, suffered the greatest erosion in the South.

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Piedmont. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont.

Consequently, the climate of Anderson

County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of about 46 inches is adequate, although less than in some neighboring counties. About 23 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months. As Hilliard illustrates, these droughts tended to be localized and tended to occur several years in a row, increasing the hardship on those attempting to recover from the previous year's crop failure (Hilliard 1984:16). Perhaps the best wide-scale example of this was the drought of 1845, which caused a series of very serious grain and food shortages throughout the state.

The average growing season is about 217 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 10 or more days (Herren 1979: Table 3). Consequently, most cotton planting, for example, did not take place until middle May, avoiding the possibility that a late frost would damage the young seedlings.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established by Braun (1950). The potential natural vegetation of the area is the Oak-Hickory-Pine forest, composes of medium tall to tall forests of broadleaf deciduous and needleleaf evergreen trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak. In actuality, the Piedmont is composed of a patchwork of open fields, pine woodlots, hardwood stands, mixed stands, and second growth fields. Shelford (1963) includes the Carolina Piedmont in the Oak-Hickory zone of the Southern Temperate Deciduous Forest Biome.

Today the "patchwork" is



Figure 5. Current vegetation on the proposed substation lot.

more than ever clearly visible. The survey parcel at one time was in pasture, but fences have been removed and soil is exposed throughout. Even on the slopes, which aerial images through the mid-1970s show as vegetated are today entirely cleared of vegetation. Even the banks of the small creek on the north side of the parcel have been clear cut.

Prehistoric and Historic Synthesis

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 6 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase.

This view, verbally suggested by Coe for a number of years, has considerable technological appeal.¹ Oliver suggests continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie (1992). They reveal a widespread distribution across the state (see also Anderson 1992b: Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Michie suggest that this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread

¹ While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

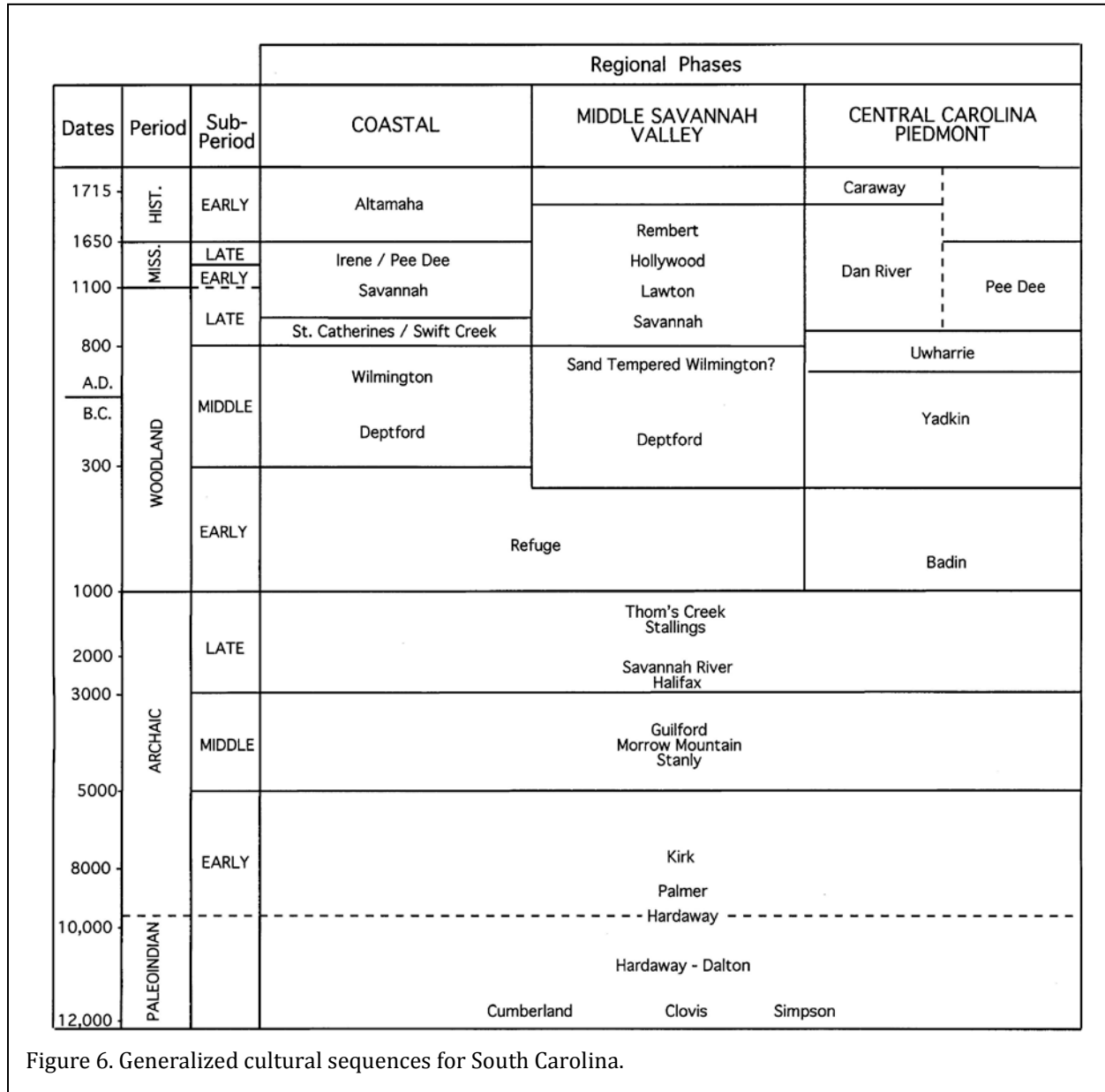


Figure 6. Generalized cultural sequences for South Carolina.

distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively more generalized band/microband foraging adaptation" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992b:46).

Distinctive projectile points include

lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often

not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.², does not form a sharp break

² The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether pottery, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods" (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the

with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites that can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts – these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials that has suggested too many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly, and Halifax projectile points.

issue in the nearby Sand Hills, unfortunately, is not well known.

Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's (1958) Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point that was originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem. Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps

1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups that would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward

argues that the most appropriate model is one that includes relatively stable and sedentary hunters and gatherers "primarily adapted to the varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations that focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact

represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sand Hills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine that reduced the oak-hickory nut masts that previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sand Hills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. Sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included is Refuge wares, also characterized by sandy

paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery that is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sand Hills and their association with coastal plain and piedmont types.

In the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.³ This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31AN19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P.

³ The ceramics suggest clear regional differences during the Woodland that seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there are "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historic Overview

General accounts of Anderson County history are presented in Clayton (1988), Dickson (1975), and Vandiver (1991). Mills' *Atlas* also shows the location of prominent settlements and localities in the early nineteenth century and gives a brief physical and economic description of the area in the 1820s (Mills 1972 [1826]).

Anderson County is part of the Cherokee Indian lands, acquired by South Carolina in 1777. Mills observed that prior to this treaty:

few of no emigrations extended as high up the country, as where Pendleton District is now located. By this treaty, accession of lands, and liberty to erect forts on the western frontier, as a barrier against the French on the southwest, were granted by the

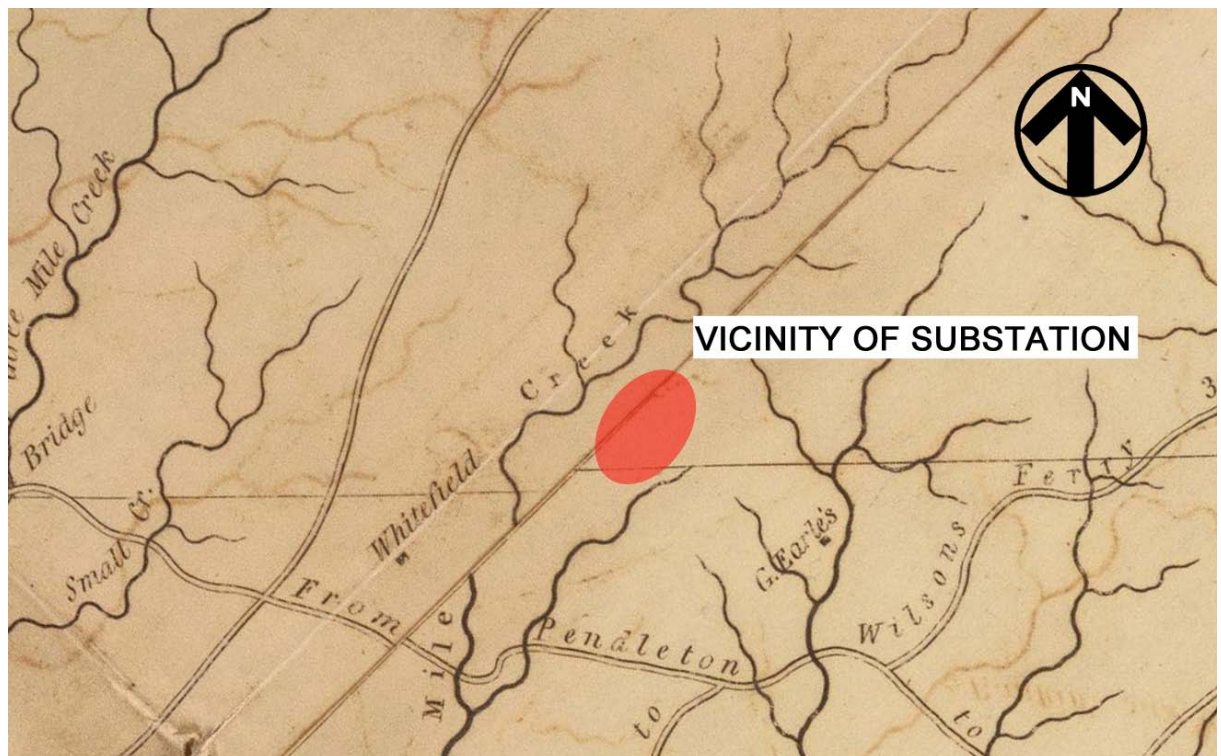


Figure 7. Mills' *Atlas* of 1826 showing the project area in Pendleton District.

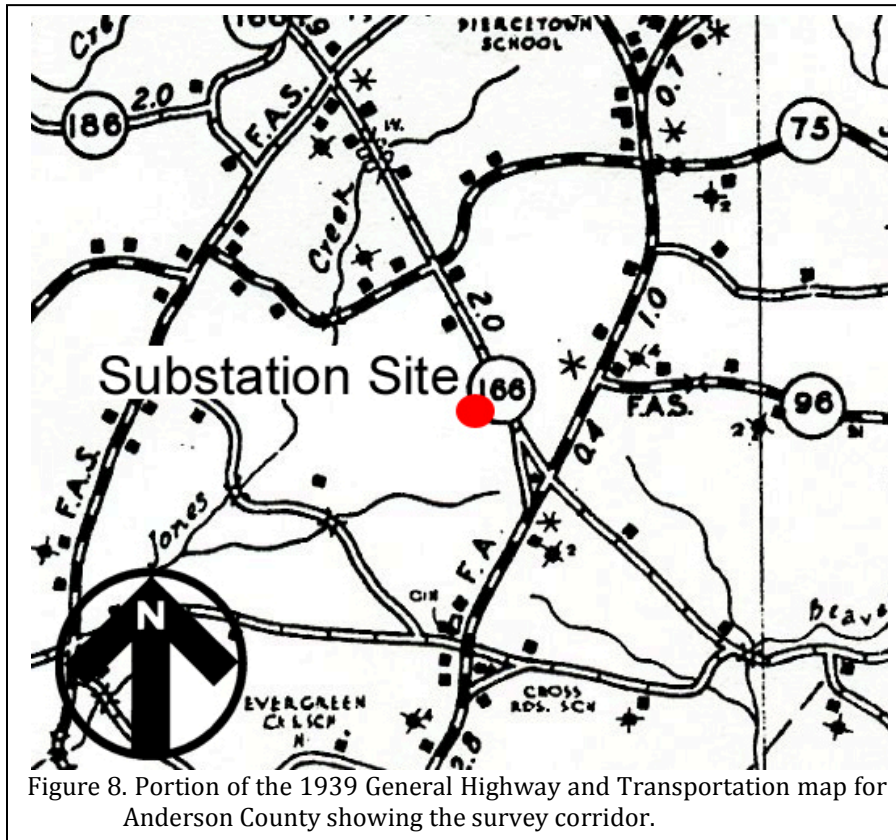


Figure 8. Portion of the 1939 General Highway and Transportation map for Anderson County showing the survey corridor.

Indians (Mills 1972
[1826]:671-672).

Both the treaty and events further north spurred settlement into the area. Most notably, the area was settled by Scotch-Irish from Virginia and Pennsylvania, augmented by Low Country families who came to the up country for summer comfort and remained permanently. Although the area accounts for only about 8% of the state's area, by 1790 it contained about 10% of the state's population.

Anderson County was formed in 1826 along with Pickens County from part of Pendleton District. A central location was selected for the location of the new county's courthouse and the county was named in honor of General Robert Anderson, a Revolutionary soldier who in 1801 had established Andersonville, a river town about 12 miles from modern Anderson, north of the confluence of the Savannah and Seneca rivers. The

1820 Mills' *Atlas* plan of Pendleton District (Figure 7) fails to reveal any subscribers in the project area.

With the introduction of the cotton gin in the late eighteenth century, the area experienced only slow and moderate changes in its society and economy. Initially an area of small, independent and diversified farmers, it slowly became characterized by larger cotton plantations, a reliance on slavery, and a one crop system eventually ruinous to the soil. By 1850 the population included 13,867 whites and 7,514 African-American slaves. The area's 1,986 farms produced only 6,670 bales of cotton, compared with 120,382 bushels of

wheat (second only to Laurens County). It also produced 240,277 pounds of butter and cheese, ranking just behind Abbeville County. Co-existing with agriculture, Anderson also supported a thriving industry which ranked fifth in annual production behind Charleston, Edgefield, Laurens, and Richland counties.

Westward emigration of people lured by the expanding cotton kingdom and increasing political polarization defending slavery grew in the first half of the nineteenth century, leading to almost unanimous citizen support in the area for nullification and secession. The county furnished 5,000 Confederate soldiers and became an ammunition-producing center. The county saw only two skirmishes and was spared from the devastation experience by other South Carolina counties. The Anderson area was only slowly "reconstructed," supporting Wade Hampton and his Red Shirts and later supporting the outlaw, Manse Jolly.

By the early twentieth century the county had shifted to textile manufacturing, although widely diversified products were also manufactured, including brooms, horse collars, mattresses, brick, cottonseed products, fertilizer, meal, flour, monuments, and metal shingles. Figure 8 is the 1937 General Highway and Transportation Map of Anderson County revealing that the project corridor is largely open land, with houses and farm units found to the north of the corridor. The pipeline at the terminus was already present by 1937.

Previous Investigations

Examination of ArchSite identified no previously recorded archaeological sites in the 100 foot diameter APE.

Aiken County has had a comprehensive architectural survey (Revel and Sherrer 2002). In spite of this, no architectural sites were identified within or even adjacent to the corridor. The closest is nearly 680 feet to the north-northeast (1244, identified as not eligible but not shown in Figure 8, indicating its construction after the late 1930s).

Methodology and Results

Archaeological Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals on transects every 100 feet across the substation lot.

All soil would be screened through ¼-inch mesh, with each test numbered sequentially along the corridor (corresponding to the station number). Each test would measure about 1 foot square and would normally be taken to a depth of at least 1.0 foot or until subsoil was encountered. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of three or more artifacts from either surface survey or shovel tests within a 50 feet area) be identified, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. For small or very recent sites these tests would be placed at 25 to 50 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. For larger sites or sites where we felt there was a potential for National Register eligibility, shovel tests would incorporate the entire site within the project corridor. Again, shovel tests would be placed at 25 to 50 foot intervals. We are precluded from examining areas outside the corridor by the easements obtain by Central Carolina Power Cooperative.

The information required for completion of South Carolina Institute of Archaeology and

Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigator.

Upon arrival at the substation lot we discovered that it was not staked, but the boundaries were clear, based on the available plan sheets. In addition, the entire 13 acre substation lot was entirely clear with ground visibility ranging from 60 to 100%. As a result, a pedestrian survey was conducted across the entire parcel with three shovel tests excavated judgmentally within the 3.5 acres that will face construction impacts.

The GPS positions were taken with a WAAS enabled Garmin 76 rover that tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital concern for the study area.

Architectural Survey

As previously discussed, we elected to use a 100 foot area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects that appeared to have been constructed before 1950. Typical of such projects, this survey recorded only those which have retained "some measure of its historic integrity" (Vivian 2001:5) and which were visible from public roads.

For each identified resource we would complete a Statewide Survey Site Form and at least two representative photographs were taken. The Survey Staff of the S.C. Department of

Archives and History would assign permanent control numbers at the conclusion of the study. The Site Forms for the resources identified during this study would be submitted to the S.C. Department of Archives and History.

Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead federal agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places are described by 36CFR60.4, which states:

the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

a. that are associated with events that have made a significant contribution to the broad patterns of our history; or

b. that are associated with the lives of persons significant in our past; or

c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or

that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, and subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site might be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those that might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered. As a result, some aspects of the evaluative process have been summarized, but we have tried to focus on an archaeological site's ability to address significant research topics within the context of its available data sets.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we focus on evaluating these sites using National Register Criterion C, looking at the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials – the physical items used on and in the property – are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts that might be collected would be conducted in Columbia at the Chicora Foundation laboratories. Any such materials will be catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological sites will be filed with the South Carolina Institute of Archaeology and Anthropology. Field notes from the project have been prepared for curation using archival standards and will be transferred to that agency as soon as the project is complete. Photographic materials are either digital and are not archival – they are being retained by Chicora Foundation.

Should materials be recovered requiring

analysis that work will follow professionally accepted standard with a level of intensity suitable to the quantity and quality of the remains.

In general, the temporal, cultural, and typological classifications of prehistoric materials are defined by such authors as Coe (1964), Yohe (1996), Blanton et al. (1986), and Oliver et al. (1986). Historic materials, generally late nineteenth or early twentieth century, are generally classified using such authors as Jones and Sullivan (1980) for glass and Adams (1980), Bartovics (1978), and Price (1979) for ceramics.

Results

The archaeological survey of the parcel failed to identify any remains. The three shovel tests revealed truncated soils. Visible conditions and shovel tests suggest that the parcel has had soil removed sometime in the past. The aerial photography suggests this process likely began by the 1940s when the area was under cultivation. The failure to find sites is likely due to steep slopes in some areas, the very minor drainage present, and the loss of soil in the project area.

No standing structures not previously surveyed were identified. The one structure outside the APE (1244) was almost covered with vegetation and was in ruinous condition. We concur with the previous finding of not eligible.

Conclusions

This study involved the examination of a 13 acre parcel proposed for use as a substation lot in Anderson County. This report, conducted for Mr. Tommy Jackson of Central Electric Power Cooperative, provides the results of the investigation and is intended to assist the company comply with their historic preservation responsibilities.

The South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No properties in or near the project area have been determined eligible for the National Register of Historic Places. Likewise, previous archaeological studies failed to identify any cultural resources within the 100 foot APE.

The current field studies found no archaeological sites within the corridor.

No standing structures were identified by this survey. Moreover, the presence of two existing substations, one dating to the mid-1970s, have already impacted the visual setting.

It is possible that archaeological remains may be encountered in the area during construction. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

CONCLUSIONS

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